

WHAT IS CLAIMED IS:

1. A display apparatus to be mounted on an automotive vehicle, comprising:
display means for displaying images, said display means having a stationary
5 position and a space position away from said stationary position in said automotive vehicle;
supporting means for supporting said display means in such a way that said display
means is linearly or pivotably movable between said stationary position and said space
position; and
controlling means for controlling said display means in such a way that said display
10 means is linearly or pivotably moved between said stationary position and said space
position by an acceleration of said automotive vehicle while cruising.
2. A display apparatus to be mounted on an automotive vehicle as set forth in claim 1,
in which said controlling means is constructed to have said display means returned to said
15 stationary position from said space position.
3. A display apparatus to be mounted on an automotive vehicle as set forth in claim 2,
in which said supporting means includes:
a first joint member directly and indirectly connected with said display means; and
20 a second joint member movably connected linearly or pivotably with said first joint
member, and in which
said controlling means includes a resilient member for exerting a resilient force to
said first joint member and said second joint member to ensure that said display means
returns to said stationary position from said space position.
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4. A display apparatus to be mounted on an automotive vehicle as set forth in claim 2,
in which said supporting means includes:
a first joint member connected with said display means; and
a second joint member movably connected linearly or pivotably with said first joint
30 member, and in which
said controlling means includes a magnetic member for exerting a magnetic force
to said first joint member and said second joint member to urge said first joint member and
said second joint member to move toward and away from each other to ensure that said
display means returns to said stationary position from said space position.
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5. A display apparatus to be mounted on an automotive vehicle as set forth in claim 4,

in which

said magnetic member is constituted by an electromagnetic coil, and in which

said controlling means includes said electromagnetic coil for exerting an electromagnetic force to said first joint member and said second joint member to ensure that said display means returns to said stationary position from said space position.

6. A display apparatus to be mounted on an automotive vehicle as set forth in claim 5, in which

said controlling means is constituted by at least one of switching unit for switching from one of two states to the other of two states, one of said two states having said electromagnetic coil energized, and the other of two states having said electromagnetic coil not energized, and electric current adjusting unit for adjusting an electric current to be received by said electromagnetic coil,

wherein said controlling means is operative to control said supporting means to have said display means shifted from said stationary position by said acceleration.

7. A display apparatus to be mounted on an automotive vehicle as set forth in claim 1, which further comprises

acceleration detecting means for detecting said acceleration of said automotive vehicle in at least one of a traveling direction, a vertical direction perpendicular to said traveling direction, and a horizontal direction perpendicular to said traveling direction,

wherein said controlling means is operative to control said supporting means to have said display means moved toward said space position from said stationary position by said acceleration detected by said detecting means.

8. A display apparatus to be mounted on an automotive vehicle as set forth in claim 1, in which said supporting means is operative to pivotably move said display means around an pivotal axis, said pivotal axis extending in at least one of a vertical direction and a horizontal direction respectively perpendicular to a traveling direction of said automotive vehicle, and in which

said controlling means is operative to control said supporting means to have said display means pivotably move in a direction opposite to said acceleration of said automotive vehicle.

9. A display apparatus to be mounted on an automotive vehicle as set forth in claim 1, in which said supporting means is operative to linearly move said display means along at

least one of a traveling direction, and a horizontal direction perpendicular to said traveling direction, and in which

5 said controlling means is operative to control said supporting means to have said display means linearly move in a direction opposite to said acceleration of said automotive vehicle.

10. A display apparatus to be mounted on an automotive vehicle as set forth in claim 1, in which

10 said display means has display surface having a normal line perpendicular thereto, said normal line extending in the horizontal direction, said supporting means having a pivotal axis parallel to said normal line, said supporting means being operative to allow said display means to be pivotably moved around said pivotal axis, and in which

15 said controlling means is operative to control said supporting means to have said display means pivotably move in a direction opposite to said acceleration of said automotive vehicle.

11. A display apparatus to be mounted on an automotive vehicle as set forth in claim 7, in which

20 said automotive vehicle comprises:
 speed detecting means for detecting a speed of said automotive vehicle; and
 angle detecting means for detecting an angle of said traveling direction of said automotive vehicle,

25 wherein said acceleration detecting means is operative to detect said acceleration in the horizontal direction perpendicular to said traveling direction on the basis of said speed and said angle.

12. A display apparatus to be mounted on an automotive vehicle as set forth in claim 7, in which

30 said controlling means includes a switching unit for switching from one of two states in which said controlling means is operative to control said display means in such a way that said display means is moved by said acceleration detected by said acceleration detecting means, to the other of said two states in which said controlling means is operative to control said display means in such a way that said display means is not moved.

35 13. A display apparatus to be mounted on an automotive vehicle as set forth in claim 1, in which

said display means is constituted by a projector unit and a display screen, said projector unit being operative to project images in an area of said display screen,

5 wherein said controlling means is operative to control said projector unit in such a way that said area of said display screen is shifted on the basis of said acceleration detected by said acceleration detecting means.

14. A display apparatus to be mounted on an automotive vehicle as set forth in claim 1, in which

10 said display means is constituted by a stereoscopic image display device for displaying a couple of images collectively forming a stereoscopic image when said couple of images are respectively perceived by right and left eyes of a viewer.